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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/682,321	10/09/2003	Lane D. Lemons	WG0052 H	8300

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EXAMINER
HUNTER, ALVIN A

ART UNIT	PAPER NUMBER
3711	

DATE MAILED: 08/11/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	Applicant(s)	
Office Action Summary	10/682,321	LEMONS ET AL.	
	Examiner	**Art Unit**	
	Alvin A. Hunter	3711	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on 3/15/04.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-35* is/are pending in the application.

4a) Of the above claim(s) *20-25* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-13,16-19 and 26-35* is/are rejected.

7)☒ Claim(s) *14 and 15* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 3/15/04 AAH
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Election/Restriction

Restriction to one of the following invention is required under 35 U.S.C. 121:

I. Claims 1-19 and 26-35, drawn to a golf ball article, classified in class 473, subclass 351.

II. Claims 20-25, drawn to a method of making a golf ball, classified in 473, subclass 351.

Inventions I and II are related as product by process of making and product made. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make other materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case, Invention I does not require the use of a thermoset material to produce a golf ball having a thermoplastic outer cover.

Because these inventions are distinct for the reasons given above and the search required for Group I is not required for Group II, restriction for examination purposes as indicated is proper.

During a telephone conversation with Terrence O'Brien on May 2, 2005, a provisional election was made without traverse to prosecute the invention of Group I, claims 1-19 and 26-35. Affirmation of the election must be made by applicant in replying to this Office action. Claims 20-25 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a nonelected invention.

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b). If one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of the inventorship must be accompanied by a petition under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

1. Claims 9, 18, and 26-35 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Claims 9, 18, and 26 recite the specific gravities being generally equal, wherein the specification requires the specific gravities of each layer to be within 1.118 to 1.132. Applicant does not define what is to be construed as generally equal. Also there is no support for claims 33-35. Present application is a continuation-in-part, wherein the parent application does not disclose any subject matter regarding the specific gravities of a four-layer golf ball.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 6 and 30 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 6 recites the limitation "the carboxylic acid groups" in line 1. There is insufficient antecedent basis for this limitation in the claim.

Claim 30 recites the limitation "the carboxylic acid groups" in line 1. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1-3, 7, 8, and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sullivan et al. (USPN 6057403) in view of Farrally et al. (Science and Golf III) and Hagman (USPN 5567772).

Regarding claim 1, Sullivan et al. discloses a golf ball having a core **50** comprising a butadiene, a mantle **52** comprising an ionomer, and a cover having an inner cover **54** and an outer cover **56** wherein the inner cover comprises a blend of ionomers, and the outer cover comprises a thermoplastic polyurethane. Sullivan et al. does not disclose the particular amount used for the core or the type of ionomer used for the mantle layer. Farrally et al. discloses that a typical core composition comprises a high cis polybutadiene, 3-40 parts by weight of 40 parts by weight of a metal oxide activator, 15-40 parts by weight of a co-crosslinking agent comprised primarily of a zinc salt of an unsaturated acrylate, and 0.5 to 5 parts by weight of a free radical initiator (See Table 51.4 on page 411). One having ordinary skill in the art would have found it obvious to use any amount within the above core composition, as taught by Farrally et al., because it is commonly known within the art to use such amounts. Hagman discloses a high flow ionomer resin useful in golf ball covers wherein the composition comprises an ionomer terpolymer having 10 to 30% acid and up to 40% of an alkyl acrylate (See Column 6, lines 37 through 48). Based on the above the ethylene component must be within the range of 30 to 90%. Hagman also implies that the alkyl acrylate may be a n-butyl acrylate being that the alkyl component need only have 1-8 carbon atoms in which butane (butyl) only has 4. Furthermore, it should be noted that the mantle layer disclosed by Sullivan et al. is a form of covering being that it covers and encloses the core; therefore, one having ordinary skill in the art would have found it obvious to employ any amount of the composition of Hagman and any type of alkyl acrylate into the mantle layer of Sullivan et al., in order to improve the processibility, resilience, and durability of the golf ball.

Regarding claim 2, Sullivan et al. disclose the core having a diameter of 0.5 to 1.25 inches (See Column 32, lines 1 through 14).

Regarding claim 3, Farrally et al. notes that the higher the Cis, the higher the COR and also notes that the Cis is dependent on the type of catalyst used for the rubber (See Table 51.5 and Page 412). One having ordinary skill in the art would have found it obvious to have the polybutadiene of any Cis, as taught by Farrally et al., in order to obtain the COR desired for the golf ball.

Regarding claim 7, Sullivan et al. discloses the inner cover having a Shore D hardness of 65 or more, wherein he notes the inner cover may be as high as 70 and having a thickness of 0.03 to 0.07 inch (See Paragraph bridging Column s 8 and 9 and Column 5, lines 50 through 55).

Regarding claim 8, Sullivan et al. disclose the outer cover having a thickness of 0.03 to 0.06 inch and a Shore D hardness of 55 or less. Applicant claims an outer cover having a Shore D hardness of 56 to 62 but does not disclose why a Shore D hardness of less than 56 would not produce the claimed invention. Furthermore, the applicant is only concerned with the Shore D hardness being greater than 53 (See Paragraph 0016 of Applicant's Specification). One having ordinary skill in the art would have drawn from the Sullivan et al. that the hardness is obvious. The outer cover layer would perform equally as well at a Shore D of 55 as that of the applicant because it increases the spin and feel of the golf ball.

Regarding claim 10, Sullivan et al. discloses fillers added to the golf ball wherein the filler are from the group of titanium dioxide, zinc oxide, and barium sulfate (See Column 19, lines 48 through 64; and Column 27, lines 60 through Column 28, line 5).

4. Claims 11, 16, and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Melvin et al. (USPN 5779562).

Regarding claims 11 and 16, Melvin et al. discloses a golf ball having a center layer comprised of a diene rubber having a diameter of 10 to 35mm, or 0.39 to 1.38 inches, a middle layer comprising a thermoplastic material having a thickness of 2.5 to 10mm, or 0.1 to 0.4 inches and having a Shore C hardness of 30 to 90, or Shore D 15 to 60, an inner cover layer comprised of a blend of ionomers, having a Shore D hardness of greater than 60, and an outer cover layer comprised of a thermoplastic polyurethane and having a Shore D hardness of 55 or less and a thickness of 0.01 to 0.10 inch (See Figure 1, Column 5, lines 10 through 51; Column 9, lines 20 through 47; Column 12, lines 30 through 59; Column 14, lines 19 through 26; and Paragraph bridging columns 14 and 15; and Column 18, lines 34 through 42). Melvin et al. does not explicitly disclose the compression of the center layer. Melvin et al. discloses the composition of the center layer being a high cis polybutadiene, 17 to 23 parts of a co-crosslinking agent, 2 to 30 parts of a metal activator, and 0.1 to 10.0 parts of a free radical initiator (See Column s 5 through 7). Melvin et al. considers the amounts within the above range being typical amounts. Being that Melvin et al. anticipates the amounts of that of the applicants at points, one having ordinary skill in the art would have drawn therefrom that the center layer of Melvin et al. inherently meets the deflection range of that claimed by the applicant; therefore, one having ordinary skill in the art would have found it obvious to have any of the above amounts for the center layer, as taught by Melvin et al., in order to improve the COR, compression, and hardness of the core.

Regarding claim 19, Melvin et al. comprises filler selected from the group of zinc oxide, barium sulfate, titanium dioxide. Furthermore, all of the above fillers are generally known within the art to be pigments used for cover layers.

5. Claims 1, 2, 4, 5, 7, 8, 10, 12, and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Melvin et al. (USPN 5779562) in view of Hagman (USPN 5567772).

Regarding claims 1, 2, 4, 5, 7, 8, and 10, Melvin et al. discloses a golf ball having a center layer comprised of a diene rubber having a diameter of 10 to 35mm, or 0.39 to 1.38 inches, a middle layer comprising a thermoplastic material having a thickness of 2.5 to 10mm, or 0.1 to 0.4 inches and having a Shore C hardness of 30 to 90, or Shore D 15 to 60, an inner cover layer comprised of a blend of ionomers, having a Shore D hardness of greater than 60, and an outer cover layer comprised of a thermoplastic polyurethane and having a Shore D hardness of 55 or less and a thickness of 0.01 to 0.10 inch (See Figure 1, Column 5, lines 10 through 51; Column 9, lines 20 through 47; Column 12, lines 30 through 59; Column 14, lines 19 through 26; and Paragraph bridging columns 14 and 15; and Column 18, lines 34 through 42). Melvin et al. does not explicitly disclose the compression of the center layer. Melvin et al. discloses the composition of the center layer being a high cis polybutadiene, 17 to 23 parts of a co-crosslinking agent, 2 to 30 parts of a metal activator, and 0.1 to 10.0 parts of a free radical initiator (See Column s 5 through 7). Melvin et al. considers the amounts within the above range being typical amounts. Being that Melvin et al. anticipates the amounts of that of the applicants at points, one having ordinary skill in the art would have drawn therefrom that the center layer of Melvin et al. inherently meets the deflection range of that claimed by the applicant; therefore, one having ordinary skill in the art would have found it obvious to have any of the above amounts for the center layer, as taught by Melvin et al., in order to improve the COR, compression, and hardness of the core. Melvin et al. discloses that the mantle may be made of different materials from that of the core but does not disclose the elastomer being that claimed by the applicant. Hagman discloses a high flow ionomer resin useful in golf ball covers wherein the composition comprises an ionomer terpolymer having 10 to 30% acid and up to 40% of an alkyl acrylate (See Column 6, lines 37 through 48). Based on the above the ethylene component must be within the range of 30 to 90%. Hagman also implies that the alkyl acrylate may be a n-butyl acrylate being that the alkyl component need only have 1-8 carbon atoms in which butyl only has 4 carbon atoms. Furthermore, it should be noted that the mantle layer disclosed by Sullivan et al. is a form of covering being that it covers and encloses the core; therefore, one having ordinary skill in the art would have found it obvious to employ any amount of the composition of Hagman and any type of alkyl acrylate into the mantle layer of Melvin et al., in order to improve the processibility, resilience, and durability of the golf ball.

Regarding claims 12 and 13, Melvin et al. discloses that the mantle may be made of different materials from that of the core but does not disclose the elastomer being that claimed by the applicant. Hagman discloses a high flow ionomer resin useful in golf ball covers wherein the composition comprises an ionomer terpolymer having 10 to 30% acid and up to 40% of an alkyl acrylate (See Column 6, lines 37 through 48). Based on the above the ethylene component must be within the range of 30 to 90%. Hagman also implies that the alkyl acrylate may be a n-butyl acrylate being that the alkyl component need only have 1-8 carbon atoms in which butyl only has 4 carbon atoms. Furthermore, it should be noted that the mantle layer disclosed by Sullivan et al. is a form of covering being that it covers and encloses the core; therefore, one having ordinary skill in the art would have found it obvious to employ any amount of the composition of Hagman and any type of alkyl acrylate into the mantle layer of Melvin et al., in order to improve the processibility, resilience, and durability of the golf ball.

6. Claims 3 and 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Melvin et al. in view of Hagman (USPN 5567772) further in view of Farrally et al. (Science and Golf III).

Regarding claims 3 and 17, Melvin in view of Hagman does not disclose the Cis content of the polybutadiene. Farrally et al. notes that the higher the Cis, the higher the COR and also notes that the Cis is dependent on the type of catalyst used for the rubber (See Table 51.5 and Page 412). One having ordinary skill in the art would have found it obvious to have the polybutadiene of any Cis, as taught by Farrally et al., in order to obtain the COR desired for the golf ball.

7. Claims 26, 27, and 29-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Molitor et al. (USPN 6299550).

Regarding claim 26, Molitor et al. discloses a golf ball having a core made of a first composition, an intermediate layer made of a second composition, an inner cover layer made of a third composition, and an outer cover layer made of a fourth composition wherein the golf ball is constructed to exhibit random orientation when floated in a solution of sufficient density to support the ball. Melvin et al. does not disclose the specific gravity of every layer but notes that the specific gravity is sufficient to where the golf ball floats in water (See Column 13, lines 16 through 31). One having ordinary skill in the art would have found it obvious to have any specific gravity value for the layer so long as the golf ball floats. Furthermore, applicant does not give any criticality as to why the specific gravities are to be generally equal in order to exhibit random orientation. One having ordinary skill in the art would have found any specific gravities for each layer to be sufficient so long as the golf ball float in a solution of sufficient density.

Regarding claim 27, Molitor et al. discloses the core having a diameter of 0.860 to 1.62 inches and more preferably 1.3 inches (See Column 13, lines 10 through 31).

Regarding claim 29, Molitor et al. discloses the thickness of the mantle being 0.02 to 0.2 inch, more preferably 0.03 to 0.1 inch and having a Shore D hardness anywhere from 10-80 (See Column 10, lines 14 through 26 and Drawings). One having ordinary skill in the art would have found it obvious to have the mantle of any hardness within the above range in order to optimize the feel and control of the golf ball.

Regarding claim 30, Molitor et al. discloses at least part of the carboxylic acid groups neutralized wherein the ion includes magnesium (See Columns 24 and 25).

Regarding claim 31, Molitor et al. discloses the thickness of the inner cover layer being 0.02 to 0.2 inch, more preferably 0.03 to 0.1 inch and having a Shore D hardness anywhere from 10-80 (See Column 10, lines 14 through 26 and Drawings). One having ordinary skill in the art would have found it obvious to have the inner cover layer of any hardness and thickness within the above ranges in order to optimize the feel and control of the golf ball.

Regarding claim 32, Molitor et al. discloses the thickness of the outer cover layer being 0.02 to 0.2 inch, more preferably 0.03 to 0.1 inch and having a Shore D hardness anywhere from 10-80 (See Column 10, lines 14 through 26 and Drawings). One having ordinary skill in the art would have found it obvious to have the outer cover layer of any hardness within the above range in order to optimize the feel and control of the golf ball.

Regarding claims 33-35, Molitor et al. discloses the core having a specific gravity of about 0.8 to 3.9, and preferably about 1.32. Noting the above regarding claim 26, it is submitted that the golf ball has the ability to float. One having ordinary skill in the art would draw therefrom that the specific gravity can be of any value so long as the golf ball floats; therefore, making the value of the specific gravity obvious.

Allowable Subject Matter

Claims 14 and 15 are objected to as being dependent upon a rejected base claim, but may be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claim 6 may be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Comments

Information under 37 CFR 1.105 is requested from the applicant. Applicant is asked to submit any information known regarding the "float" test as used with the present invention in comparison to the specific gravities of other prior art golf balls.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alvin A. Hunter whose telephone number is (571) 272-4411. The examiner can normally be reached on Monday trough Friday from 7:30AM to 4:00PM Eastern Time.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory Vidovich, can be reached on 571-272-4415. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

AAH
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